



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I**  
2100 RENAISSANCE BOULEVARD, SUITE 100  
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

March 4, 2013

Mr. Timothy S. Rausch  
Senior Vice President and Chief Nuclear Officer  
PPL Susquehanna, LLC  
769 Salem Boulevard  
Berwick, PA 18603-0467

**SUBJECT: ANNUAL ASSESSMENT LETTER FOR SUSQUEHANNA STEAM  
ELECTRIC STATION, UNITS 1 AND 2 (REPORT 05000387/2012001  
AND 05000388/2012001)**

Dear Mr. Rausch:

On February 12, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed its end-of-cycle performance review of Susquehanna Steam Electric Station (Susquehanna) Units 1 and 2. The NRC reviewed the most recent quarterly performance indicators in addition to inspection results and enforcement actions from January 1, 2012 through December 31, 2012. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility. The security inspection plan will be sent via separate correspondence.

The NRC determined that the performance at Susquehanna Unit 1 during the most recent quarter was within the Regulatory Response Column of the NRC's Reactor Oversight Process (ROP) Action Matrix because of one finding having low to moderate safety significance (i.e., white) associated with the Initiating Events Cornerstone. The White finding was related to an internal flooding event on July 16, 2010, which required the operators to insert a manual scram and isolate the normal heat sink.

Unit 1 began the assessment period in the Degraded Cornerstone Column of the NRC's ROP Action Matrix due to the White finding discussed above and a White PI for Unplanned Scrams per 7000 critical hours. On May 7, 2012, the NRC issued an interim 95002 supplemental inspection report and follow-up assessment letter (ML1215A374), which closed the White PI and held the White finding open. This moved Unit 1 to the Regulatory Response Column. A follow up 95002 inspection was completed on December 14, 2012. The associated inspection report and follow up assessment letter (ML13025A325) was issued on January 25, 2013. This inspection closed the White finding and moved Unit 1 to the Licensee Response Column of the NRC Action Matrix effective January 25, 2013. Therefore, the NRC plans to conduct ROP baseline inspections at Unit 1.

The NRC determined the performance at Susquehanna Unit 2 during the most recent quarter was within the Licensee Response Column of the NRC's ROP Action Matrix because all inspection findings had very low safety significance (i.e., green), and all PIs indicated that your performance was within the nominal, expected range (i.e., green). Therefore, the NRC plans to conduct ROP baseline inspections at Unit 2.

The NRC evaluates cross-cutting themes to determine whether a substantive cross-cutting issue (SCCI) exists in a particular area and to encourage licensees to take appropriate actions before more significant performance issues emerge. In our 2011 Mid-Cycle assessment letter dated September 1, 2011 (ML112430469), a SCCI was identified in the Corrective Action Program (CAP) component of the Problem Identification and Resolution cross-cutting area related to P.1(c) - Evaluation of Identified Problems. This SCCI in P.1(c) was continued in the 2011 Annual Assessment letter (ML12061A021) and the 2012 Mid-Cycle assessment letter (ML12248A066). Our letters indicated this SCCI in P.1(c) will remain open until PPL has demonstrated sustainable performance improvement as evidenced by effective implementation of an appropriate corrective action plan that results in no safety significant findings and a notable reduction in the overall number of inspection findings with the same cross-cutting aspect.

The NRC has determined the exit criteria were not met because there was not a notable reduction in the number of findings and the corrective action plans associated with monitoring progress were not effectively implemented. Specifically, there were four findings with an aspect of P.1 (c) related to evaluation quality. While PPL implemented a number of appropriate corrective action plans, PPL's monitoring of its progress did not provide reliable information that would demonstrate sustainable performance improvement.

This letter is the fourth consecutive assessment letter documenting a substantive cross-cutting issue with the same cross-cutting aspect. Consistent with guidance in NRC Inspection Manual Chapter 0305, Section 14.04, the NRC requests that during the upcoming Annual Assessment Public Meeting, PPL describe the status of your corrective action plans, trends in your internal metrics related to evaluation quality, and your plans to ensure the effectiveness of your actions. In addition, to facilitate discussion during the Annual Assessment Public Meeting, the NRC requests PPL provide a written letter on the docket by April 3, 2013, summarizing your corrective actions, trends in your progress, and any adjustments you made as a result of your internal reviews. The NRC plans to complete baseline inspections later this year focused on these elements of your corrective action plans related to the SCCI in P.1(c). Finally, the NRC is aware of your plans to complete an independent third party safety culture assessment in the first quarter of 2013. As part of our baseline inspections, the NRC plans to review your analysis of the results for insights related to progress in corrective action program evaluation quality.

Additionally, in our 2011 Annual Assessment letter assessment letter dated March 1, 2012 (ML12061A021), the NRC opened a second SCCI in the Resources component of the Human Performance cross-cutting area related to H.2(c) - Documentation, Procedures and Component Labeling. The SCCI was continued in the 2012 Mid-Cycle assessment letter (ML12248A066). Our letters indicated this SCCI with an aspect in H.2(c) will remain open until PPL has demonstrated sustainable performance improvement as evidenced by effective implementation of an appropriate corrective action plan that results in no safety significant findings and a notable reduction in the overall number of inspection findings with the same cross-cutting aspect. During this assessment period, the NRC determined that PPL demonstrated sustainable performance improvement related to this SCCI. In 2012, there were no safety significant findings identified with an aspect in H.2(c) and there was a notable reduction from four to two of findings with an aspect in H.2(c). Additionally NRC inspections determined PPL corrective action plans were being effectively implemented related to your Procedures Upgrade Project, permanent Station Procedures Group, and augmented oversight by management of

staff procedures use and adherence. As a result, the substantive cross-cutting issue in Human Performance related to H.2(c), Documentation, Procedures and Component Labeling is closed.

The enclosed inspection plan lists the inspections scheduled through June 30, 2014. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last nine months of the inspection plan are tentative and may be revised at the mid-cycle performance review. In addition to baseline inspections, the NRC will perform Temporary Instruction (TI) 182, "Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping and Tanks."

Additionally, from January 1 to December 31, 2012, the NRC issued three severity level IV traditional enforcement violations associated with impeding the regulatory process. Therefore, the NRC plans to conduct an inspection using Inspection Procedure (IP) 92723, "Follow-up Inspection of Three or More Severity Level IV Traditional Enforcement Violations in the Same Area in a 12-Month Period," to follow-up on these violations. The NRC has conducted similar inspections using IP 92723 at Susquehanna in 2010 and 2012 for violations impeding the regulatory process. The NRC intends to review previous traditional enforcement violations associated with the IP 92723 inspections in 2010 and 2012 to evaluate the recurring nature of these issues, the efficacy of prior corrective actions and extent of cause. This inspection will be scheduled and completed once you inform the NRC of your readiness for the inspection.

The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes. This inspection plan does not include security related inspections, which will be sent via separate, non-publicly available correspondence.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Document Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Please contact Mel Gray at (610)337-5209 with any questions you have regarding this letter.

Sincerely,

**/RA/**

William M. Dean,  
Regional Administrator

Docket Nos. 50-387; 50-388  
License Nos. NPF-14, NPF-22

Enclosure: Susquehanna Steam Electric Station Inspection/Activity Plan

cc w/encl: Distribution via ListServ

T. Rausch

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**Susquehanna**  
**Inspection / Activity Plan**  
**01/01/2013 - 06/30/2014**

Unit Number	Planned Dates Start	Planned Dates End	Inspection Activity	Title	No. of Staff on Site
			<b>4/22 EXM - SUSQ INITIAL EXAM</b>		<b>5</b>
1	03/25/2013	03/29/2013	U01868	FY13-SUSQ INITIAL OPERATOR LICENSING EXAM	
1	05/13/2013	05/24/2013	U01868	FY13-SUSQ INITIAL OPERATOR LICENSING EXAM	
			<b>EP EXER - EP EXERCISE TEAM INSPECTION</b>		<b>4</b>
1,2	01/01/2013	03/31/2013	IP 7111401	Exercise Evaluation	
			<b>SIT - SUSQUEHANNA UNIT 2 12-19-12 SCRAM SIT</b>		<b>4</b>
2	01/14/2013	02/01/2013	IP 93812	Special Inspection	
			<b>7111108G - U2 INSERVICE INSPECTION</b>		<b>1</b>
2	04/22/2013	04/26/2013	IP 7111108G	Inservice Inspection Activities - BWR	
			<b>71124 - RADIATION SAFETY INSPECTION</b>		<b>1</b>
1,2	04/22/2013	04/26/2013	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1,2	04/22/2013	04/26/2013	IP 71124.02	Occupational ALARA Planning and Controls	
1,2	04/22/2013	04/26/2013	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1,2	04/22/2013	04/26/2013	IP 71124.04	Occupational Dose Assessment	
			<b>71124 - RADIATION SAFETY INSPECTION</b>		<b>1</b>
1,2	06/17/2013	06/21/2013	IP 71124.07	Radiological Environmental Monitoring Program	
1,2	06/17/2013	06/21/2013	IP 71151	Performance Indicator Verification	
			<b>7111121 - CDBI</b>		<b>9</b>
1,2	07/29/2013	08/02/2013	IP 7111121	Component Design Bases Inspection	
1,2	08/12/2013	08/16/2013	IP 7111121	Component Design Bases Inspection	
1,2	08/26/2013	08/30/2013	IP 7111121	Component Design Bases Inspection	
			<b>7111111B - SUSQUEHANNA REQUAL INSP WITH P/F RESULTS</b>		<b>2</b>
1	11/11/2013	11/15/2013	IP 7111111B	Licensed Operator Requalification Program	
			<b>71124 - RADIATION SAFETY INSPECTION</b>		<b>1</b>
1,2	09/09/2013	09/13/2013	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1,2	09/09/2013	09/13/2013	IP 71124.04	Occupational Dose Assessment	
			<b>EP PROGR - EP PROGRAM INSPECTION</b>		<b>1</b>
1,2	11/04/2013	11/08/2013	IP 7111402	Alert and Notification System Testing	
1,2	11/04/2013	11/08/2013	IP 7111403	Emergency Preparedness Organization Staffing and Augmentation System	
1,2	11/04/2013	11/08/2013	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
			<b>71124 - RADIATION SAFETY INSPECTION</b>		<b>1</b>
1,2	11/18/2013	11/22/2013	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1,2	11/18/2013	11/22/2013	IP 71124.02	Occupational ALARA Planning and Controls	
1,2	11/18/2013	11/22/2013	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	

This report does not include INPO and OUTAGE activities.  
 This report shows only on-site and announced inspection procedures.

Susquehanna  
 Inspection / Activity Plan  
 01/01/2013 - 06/30/2014

Unit Number	Planned Dates Start	Planned Dates End	Inspection Activity	Title	No. of Staff on Site
			<b>71124</b>	<b>- RADIATION SAFETY INSPECTION</b>	<b>1</b>
1,2	11/18/2013	11/22/2013	IP 71124.04	Occupational Dose Assessment	
1,2	11/18/2013	11/22/2013	IP 71151	Performance Indicator Verification	
			<b>711245</b>	<b>- RADIATION SAFETY</b>	<b>1</b>
1,2	03/17/2014	03/21/2014	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
1,2	03/17/2014	03/21/2014	IP 71124.02	Occupational ALARA Planning and Controls	
1,2	03/17/2014	03/21/2014	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
1,2	03/17/2014	03/21/2014	IP 71124.04	Occupational Dose Assessment	
1,2	03/17/2014	03/21/2014	IP 71151	Performance Indicator Verification	
			<b>7111108G</b>	<b>- U1 INSERVICE INSPECTION</b>	<b>1</b>
1	03/24/2014	03/28/2014	IP 7111108G	Inservice Inspection Activities - BWR	
			<b>TI-182</b>	<b>- DEGRAD UNDERGROUND PIPING - PHASE 2</b>	<b>1</b>
1,2	03/31/2014	04/04/2014	IP 2515/182	Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping	
			<b>71152B</b>	<b>- PI&amp;R BIENNIAL</b>	<b>1</b>
1,2	06/02/2014	06/07/2014	IP 71152B	Problem Identification and Resolution	
1,2	06/16/2014	06/21/2014	IP 71152B	Problem Identification and Resolution	
			<b>71124</b>	<b>- RADIATION SAFETY RETS</b>	<b>1</b>
1,2	06/16/2014	06/20/2014	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
1,2	06/16/2014	06/20/2014	IP 71151	Performance Indicator Verification	

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